NOTES

1. Papers selected for inclusion in General Sessions will be available at the Conference in the following official languages of the United Nations: English, French, Russian and Spanish.

2. Papers selected for inclusion in Specialized Sessions will be available at the Conference in only one of the above official languages.

3. Summaries of all papers, as submitted by contributors, will be available at the Conference in the following official languages of the United Nations: English, French, Russian and Spanish.

4. Papers and summaries will not be available for general distribution in advance of the Conference. They will be published in advance in limited quantities only for the use of delegations of participating governments and of other authorized participants. Post-Conference publication and general distribution of the Conference Proceedings will follow United Nations practices as laid down by the United Nations Publications Board.

THE UTILISATION OF HOUSEHOLD REFUSE AND PURIFIED SLUDGE BY COMPOSTING

by
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SUMMARY

Since 1922 a Swiss undertaking has been concerned with the problem of the disintegration of household refuse. The following summary is based on a paper dealing in particular with the problems associated with it.

The biological process of aerobic fermentation

Aerobic fermentation is an exothermic process initiated by micro-organisms. MIEHE has shown this in his experiments with hay from 1930 onwards. This phenomenon, however is a difficult one to relate to the complex problem of household refuse in view of the heterogeneous nature of the product. According to a study by Dr. GLATHE, director of the Giessen Microbiological Institute, the numeration carried out by the Koch plaque method, has shown that green night-soil contains up to 6,000 million germs per gram. Even this method of numeration gives an estimate lower than the real one, because a proportion of the micro-organisms do not develop on the nutrient base used. This concentration of microbes is, however, 100 to 1000 times greater than in a very good soil. With correct composting the refuse reaches a temperature of 60°C to 70°C in the interior of the heap, which is maintained at this level for several days. The efficient destruction of pathogenic germs, worm eggs and the seeds of weeds, is achieved as much by the high temperature as by the antibiotic material which comes from the digestion of micro-organisms occurring in this system.

From the hygienic point of view

Experiments carried out by several institutes of hygiene and faculties of medicine show that, with correct manipulation of the compost heap, the ascarides eggs are destroyed after 10 days at a temperature of 40°C and after only 1 day at a temperature of 60°C. The experts consider that the adequate treatment of household refuse presents no danger.

Importance of night soil as a top dressing

The transformation of night soil, either alone, or together with water purification sudge by means of composting is especially interesting for all those countries with a pressing need for arable land. The useof this compost as a dressing can influence agricultural production enormously.

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